

Remarks

Rejection of Claims under 35 U.S.C § 102

Claims 1-5, 7-9, 18-19, 23-26, and 28-31 are rejected under 35 U.S.C §102(b) as being anticipated by Miyazaki (U.S. Patent No. 3,553,719, "Miyazaki"). Applicants note Examiner cited US 3,555,719; however, Applicants assume for purposes of this response that this was a typographical error and should have been 3,553,719. The Applicants respectfully traverse this rejection.

In regards to independent claim 1, claim 1 discloses a fluid-ejection device comprising: "at least one nozzle operatively associated with *at least one displacement unit configured to impart mechanical energy* on fluid associated with the nozzle to cause a fluid drop to be ejected from the nozzle; and, a cathode ray tube configured to supply energy *to selectively effect the displacement unit to control ejection of the fluid drop.*" *Emphasis added.* Applicants traverse Examiner's interpretation of Miyazaki. Miyazaki discloses, in Fig. 1, "the printing device of this invention comprises an electron-pervious thin film type printing tube, an ink vessel disposed in front of the thin film of said tube with a space of several tens microns between them, said vessel having small holes in the portion opposite to said thin film, and a control electrode interposed between insulating . . .[plates] and disposed in front of said small holes, **thereby the ink in said vessel being electrified by the accelerated electron beam from said printing tube, the amount of electrification of the ink being modulated according to the potential of said control electrode** , and thus the amount of the ink deposited on the recording paper being controlled by said potential which depends on the information signal. Col. 2, lines 10-22, *Emphasis added.* Applicants assert that in Miyazaki there is no device disclosed capable of imparting mechanical energy on fluid associated with ink vessel 5. Applicants note Examiner in rejecting claim 1 cites column 2 lines 5-38 and figures 1-4 but never identifies a numeral reference that identifies what Examiner asserts is at least one displacement unit configured to impart mechanical energy on fluid. Applicants note, in addition to the above disclosure which is found in column 2, Miyazaki discloses ". "[t]he deflected electron beam passes through an electron-pervious thin film 4 made of, for example, aluminum foil. Quick-drying ink 6 of a dielectric nature received in an ink vessel 5 of dielectric material disposed in front of the above-mentioned thin film 4, **is electrified by the negative charge of the electron beam which passed [though] the thin film. The negative electric**

charge carried on the ink 6 is acted on by the signal voltage impressed on an electrode 8 interposed between insulating plates 7, and ink in an amount according to said signal voltage is drawn out by a background electrode 9 and is transferred to the recording paper" Col. 2, lines 25-36, *Emphasis added*. Applicants assert Miyazaki clearly discloses the use of an electron beam to electrify an ink thereby imparting electrical energy to the ink with the amount of electrification being controlled by a control electrode and thus controlling the amount of ink deposited on the recording paper. Because Miyazaki does not disclose all of the elements/limitations of independent claim 1 Applicants believe that the rejection of claim 1 has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of independent claim 1 under 35 U.S.C. § 102(b) in respect to Miyazaki.

Dependent claims 2-5 and 7-9 are dependent upon independent claim 1, and are therefore believed to be allowable as dependent upon a believed allowable claim. Accordingly, Applicants believe that the rejection of claims 2-5 and 7-9 has been overcome at least for this reason alone. Therefore, Applicants respectfully request the Examiner withdraw the rejection of dependent claims 2-5 and 7-9 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In addition, in regards to dependent claim 2, Applicants traverse Examiner's statement that Miyazaki teaches "wherein the cathode ray tube comprises a cathode ray pin tube having at least one conductor configured to receive an electron beam generated by the cathode ray tube, the at least one conductor being electrically coupled to an individual displacement unit via a conductive path." Examiner argues the fiber-optics cathode ray tube shown in Fig. 4 discloses the limitations claimed in dependent claim 2 and identifies numeral 33 as being an electrical conductor coupled to an individual displacement unit. Applicants note Miyazaki discloses an "electroluminescent layer 33," as numeral 33. Col. 3, lines 52-53. Applicants assert that an electroluminescent layer does not disclose at least one conductor being electrically coupled to an individual displacement unit. Because Miyazaki does not disclose all of the elements/limitations of dependent claim 2 Applicants believe that the rejection of claim 2 has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claim 2 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In regards to dependent claim 3, Applicants traverse Examiner's statement that Miyazaki teaches "wherein the cathode ray pin tube is configured to emit an electron beam along a first axis and wherein the at least one conductor extends along a second axis which is generally orthogonal to the first axis." Examiner argues the fiber-optics cathode ray tube shown in Fig. 4 discloses the limitations claimed in dependent claim 3 but makes no reasoned argument and does not identify any particular numeral or structure that supposedly makes such a disclosure. Applicants assert that Miyazaki is silent on the limitations claimed in dependent claim 3. Because Miyazaki does not disclose all of the elements/limitations of dependent claim 3 Applicants believe that the rejection of claim 3 has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claim 3 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In regards to dependent claim 4, Applicants traverse Examiner's statement that Miyazaki teaches "wherein the cathode ray pin tube is configured to emit an electron beam along a first axis and wherein conductor extends along a second axis which is generally parallel to the first axis." Examiner argues the fiber-optics cathode ray tube shown in Fig. 4 discloses the limitations claimed in dependent claim 4 but makes no reasoned argument and does not identify any particular numeral or structure that supposedly makes such a disclosure. Applicants assert that Miyazaki is silent on the limitations claimed in dependent claim 4. Because Miyazaki does not disclose all of the elements/limitations of dependent claim 4 Applicants believe that the rejection of claim 4 has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claim 4 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In regards to dependent claim 5, Applicants traverse Examiner's statement that Miyazaki teaches "wherein the cathode ray pin tube is configured to emit an electron beam along a first axis and wherein conductive pin extends along a second axis which is generally obtuse to the first axis." Examiner argues the fiber-optics cathode ray tube shown in Fig. 4 discloses the limitations claimed in dependent claim 5 but makes no reasoned argument and does not identify any particular numeral or structure that supposedly makes such a disclosure. Applicants assert that Miyazaki is silent on the limitations claimed in dependent claim 5. Because Miyazaki does not disclose all of the elements/limitations of dependent claim 5 Applicants believe that the rejection of claim 5 has been overcome. Therefore, Applicants respectfully

request that the Examiner withdraw the rejection of dependent claim 5 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In regards to dependent claim 7, Applicants traverse Examiner's statement that Miyazaki teaches "wherein the at least one displacement unit comprises multiple independently controllable displacement units associated with the nozzle." Examiner argues the fiber-optics cathode ray tube shown in Fig. 4 discloses the limitations claimed in dependent claim 7 but makes no reasoned argument and does not identify any particular numeral or structure that supposedly makes such a disclosure. Applicants assert that Miyazaki is silent on the limitations claimed in dependent claim 7. Because Miyazaki does not disclose all of the elements/limitations of dependent claim 7 Applicants believe that the rejection of claim 7 has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claim 7 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In regards to dependent claim 8, Applicants traverse Examiner's statement that Miyazaki teaches "wherein the displacement unit comprises a deformable membrane." Examiner argues the fiber-optics cathode ray tube shown in Fig. 4 discloses the limitations claimed in dependent claim 8 but makes no reasoned argument but identifies numeral 15 shown in figures 2 and 4 of Miyazaki that supposedly makes such a disclosure. Applicants assert numeral 15 is described in Miyazaki, in regards to figure 2 only, as "a secondary emissive material 15." Applicants have no idea and Examiner has provided no reasoned argument how a secondary emissive material discloses a deformable membrane. Applicants assert that Miyazaki is silent on the limitations claimed in dependent claim 8. Because Miyazaki does not disclose all of the elements/limitations of dependent claim 8 Applicants believe that the rejection of claim 8 has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claim 8 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In regards to independent claim 18, claim 18 has been amended to include the limitations of dependent claim 21 which Examiner has objected to. Since amended claim 18 now includes all of the limitations of the base claim and any intervening claims Applicants assert amended independent claim 18 is now allowable. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of dependent claim 18 under 35 U.S.C. § 102(b) in respect to Miyazaki.

Dependent claims 19-20 and 22 are dependent upon independent claim 18, and are therefore believed to be allowable as dependent upon a believed allowable claim. Accordingly, Applicants believe that the rejection of claims 19-20 and 22 has been overcome at least for this reason alone. Therefore, Applicants respectfully request the Examiner withdraw the rejection of dependent claims 19-20 and 22 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In regards to independent claim 23, claim 23 has been amended to include the limitation "a fluid assembly comprising: at least one displacement unit configured to impart mechanical energy on a fluid, and an associated nozzle through which the fluid can be selectively ejected" As argued above for independent claim 1 Applicants assert Miyazaki does not disclose a fluid assembly comprising: at least one displacement unit configured to impart mechanical energy on a fluid, and an associated nozzle through which the fluid can be selectively ejected. Therefore, Applicants respectfully request the Examiner withdraw the rejection of amended independent claim 23 under 35 U.S.C. § 102(b) in respect to Miyazaki.

Dependent claims 24-28 are dependent upon independent claim 23, and are therefore believed to be allowable as dependent upon a believed allowable claim. Accordingly, Applicants believe that the rejection of claims 24-28 has been overcome at least for this reason alone. Therefore, Applicants respectfully request the Examiner withdraw the rejection of dependent claims 24-28 under 35 U.S.C. § 102(b) in respect to Miyazaki.

In regards to independent claim 29, claim 29 discloses a fluid-ejection device comprising: "a means for imparting mechanical energy on fluid contained in an associated chamber sufficient to cause fluid to be ejected from the chamber; a first conductor configured to deliver a first signal to the means for imparting mechanical energy; and, a cathode ray tube configured to deliver energy to the first conductor." Although claim 29 is not identical to claim 1 Applicants assert the reasons argued above for claim 1 are applicable to claim 29 as well. Applicants assert that Miyazaki does not disclose a cathode ray tube configured to deliver energy to a first conductor configured to deliver a first signal to a means for imparting mechanical energy on fluid contained in an associated chamber sufficient to cause fluid to be ejected from the chamber. Applicants note that Miyazaki does not show any device capable of imparting mechanical energy, thus, Miyazaki cannot disclose at least "a first conductor configured to deliver a first signal to the means for imparting mechanical

energy; and, a cathode ray tube configured to deliver energy to the first conductor." Because Miyazaki does not disclose all of the elements/limitations of independent claim 29 Applicants believe that the rejection of claim 29 has been overcome. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of independent claim 29 under 35 U.S.C. § 102(b) in respect to Miyazaki.

Dependent claims 30 and 31 are dependent upon independent claim 29, and are therefore believed to be allowable as dependent upon a believed allowable claim. Accordingly, Applicants believe that the rejection of claims 30 and 31 has been overcome at least for this reason alone. Therefore, Applicants respectfully request the Examiner withdraw the rejection of dependent claims 30 and 31 under 35 U.S.C. § 102(b) in respect to Miyazaki.

Applicants acknowledge the allowance of claims 10-14, 16-17, and 33-37. Applicants also acknowledge that claims 6 and 20-22 are objected to as being dependent upon a rejected base claim. While Applicants agree with Examiner's conclusions regarding patentability without necessarily agreeing with or acquiescing in the Examiner's reasoning. In particular, Applicants submit that the above identified claims are allowable because the prior art fails to teach, anticipate, or render obvious the invention as claimed independent of how the invention is paraphrased.

In view of the above, it is respectfully submitted that this case is in condition for allowance and now may be passed to issue forth with. A holding to this effect is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this patent application, the Examiner is invited to contact the undersigned attorney during normal Pacific Time Zone business hours.

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